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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/620,919 | 07/21/2000 | Henry Samueli | 39966/LTR/B600 | 4027 |

7590 02/13/2003
CHRISTOPHER C. WINSLADE
MCANDREWS, HELD & MALLOY
500 W. MADISON STREET
SUITE 3400
CHICAGO, IL 60661

EXAMINER

LEE, CHI HO A

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2663

DATE MAILED: 02/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/620,919

Applicant(s)

SAMUELI ET AL.

Examiner

Andrew Lee

Art Unit

2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 145-165 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 145-149, 151-155, 157-161, 163, 165 and 166 is/are rejected.
- 7) ☒ Claim(s) 150, 156, 162, and 164 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Reissue Applications

1. This application is objected to under 37 CFR 1.172(a) as lacking the written consent of all assignees owning an undivided interest in the patent. The consent of the assignee must be in compliance with 37 CFR 1.172. See MPEP § 1410.01.

A proper assent of the assignee in compliance with 37 CFR 1.172 and 3.73 is required in reply to this Office action.

2. The original patent, or a statement as to loss or inaccessibility of the original patent, must be received before this reissue application can be allowed. See 37 CFR 1.178.

Claim Objections

3. Claims 145-166 are objected to because of the following informalities:

Reissue claims should be underlined. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 145-147, 157-159, 163 and 166 are rejected under 35 U.S.C. 102(b) as being anticipated by Motley et al U.S. Patent Number 3,962,637.

Re Claims 145, 157, and 163, fig 3 teaches the A/D converter 67 for converting data symbols with plurality of data levels and operating speed (See col. 5, lines 10-25 & col. 6, lines 40-44); timing control 94 regulating the A/D converter (See col. 8, lines 33-35); equalization 79 for receiving digital signals from 67 and selecting DI and DQ to provide error signals (See col. 8, lines 15-19).

Re Claims 146, 158, AGC 65 coupled to the 67.

Re Claims 147, 159, and 166, Decoder 89 coupled to 79.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 148, 154, and 160 are rejected under 35 U.S.C. 103(a) as being unpatentable over Motley et al U.S. Patent Number 3,962,637 in view of Loyer U.S. Patent Number 4,652,874.

Re Claims 148, 154, and 160, Motley teaches an adaptive digital modem fig 3, wherein the decoder 89 is coupled to the business machine fig 1. Motley fails to explicitly teach the modem coupled to the MAC controller. However, Loyer teaches communication interface for coupling a modem to an MAC token network (See abstract). The MAC controller can be implemented into the business machine controlling the access for the plurality the slave stations (fig 1). In particular, it is known that the MAC layer defines a special timed-token protocol that guarantees

efficient transmission of data. Therefore, it would have been obvious to one ordinary skilled incorporate the teaching of Loyer into the teaching of Motley.

8. Claims 149, 155, and 161 are rejected under 35 U.S.C. 103(a) as being unpatentable over Motley et al U.S. Patent Number 3,962,637 in view of Wang et al U.S. Patent Number 5,052,000.

Re Claims 149, 155, and 161, Motley teaches in fig 3, the equalization circuit 79. Motley fails to explicitly teach the equalizer that includes a feed-forward equalizer, a data slicer, and a decision feedback equalizer. However, Wang teaches (above) in fig 2, elements 211, 213, 214 collectively (See col. 5, lines 13-39). Wang teaches with the (above) equalizer less noise enhancement is facilitated. Therefore, it would have been obvious to one ordinary skilled replace the equalizer in Motley with the equalizer in Wang for less noise enhancement.

9. Claim 151-153, and 165 are rejected under 35 U.S.C. 103(a) as being unpatentable over Motley et al U.S. Patent Number 3,962,637.

Re Claims 151 and 165, refer to Claim 145, wherein Motley teaches the modem baud rate of 1600 symbols per second. Examiner takes official notice that broadband modems are available with at least 25 megasymbols per second. One skilled in the art would have been motivated to equalize any incoming signal rate. Therefore, it would have been obvious to one ordinary skilled equalize at least 25 megasymbols per second with the adaptive digital modem in Motley.

Re Claim 152, AGC 65 coupled to the 67.

Re Claim 153, Decoder 89 coupled to 79.

Allowable Subject Matter

10. Claims 150, 156, 162, and 164 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


The following is a statement of reasons for the indication of allowable subject matter:

In combination with Claims 145 and 150, prior art fails to teach the timing recovery circuit regulating the particular rate in accordance with a product of a plurality of peak signal samples.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Lee whose telephone number is 703-305-1500. The examiner can normally be reached on Monday to Friday from 8:30AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 703-308-5340. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.


AL
February 6, 2003


CHAU NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600